



Name: _____

Mr. Tiénou-Gustafson & Mr. Bielmeier

Geometry, Period _____

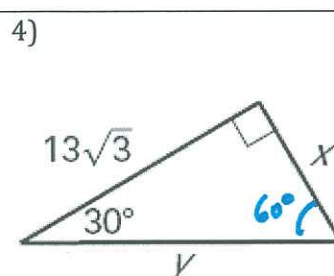
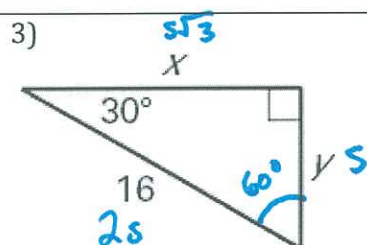
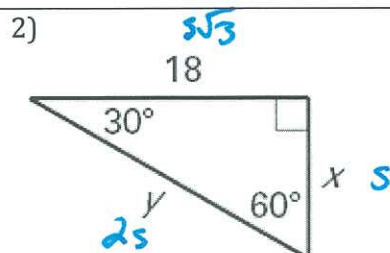
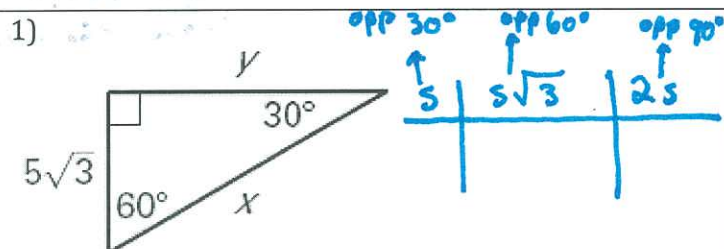
Due Date: Wed, 25 Feb 2015 Failure to show all work will result in LaSalle.

HW107 - 30-60-90 triangles

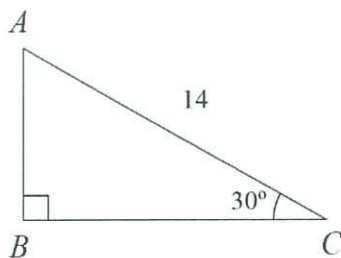
Form A

**Geometry
Homework**

For problems 1 – 6, find the value of **BOTH** variables. Write your answers in simplest radical form. To show work, either set up a chart (like in the classwork), or label the 3 sides with their proportions (using “s”).



- 5) In right triangle $\triangle ABC$ shown below, \overline{AC} is 14 inches long, and the measure of $\angle C$ is 30° . How many inches long is \overline{AB} ?



- 6) *Hint: sketch out ACT-style problems that don't give you a diagram.* Hint 2: It's not K.

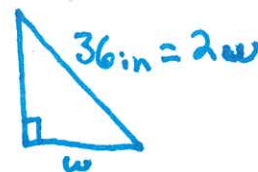
The diagonal of a rectangle is 36 inches long and is twice the width of the rectangle. What is the length of this rectangle, in inches?

F. 18

G. $18\sqrt{2}$ H. $18\sqrt{3}$

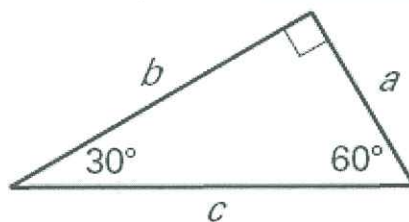
J. 36

K. Cannot be determined from the given information



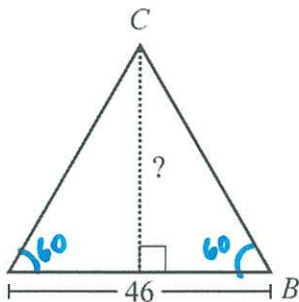
- 7) Use the figure to the right to complete the table below.

a	9	$s\sqrt{3} = 9$ $s = \frac{9\sqrt{3}}{3} = 3\sqrt{3}$	11	
b	$1\sqrt{3}$	9	$5\sqrt{3}$	
c	18			16



8)

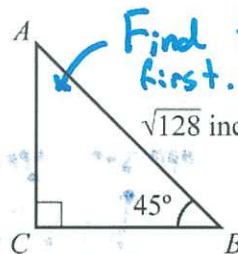
Triangle $\triangle ABC$, shown below, is an equilateral triangle, and \overline{AB} is 46 inches long. What is the height, in inches, of $\triangle ABC$?



- F. 23
- G. $23\sqrt{2}$
- H. $23\sqrt{3}$
- J. 46
- K. Cannot be determined from the given information

9)

In the figure shown below, how many inches long is \overline{AC} ?



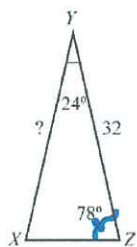
Find this angle first... what special right triangle does this make?

- F. 8
- G. $8\sqrt{2}$
- H. $8\sqrt{3}$
- J. 16
- K. $16\sqrt{2}$

Spiraled Review

1.

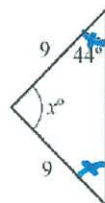
In $\triangle XYZ$ shown below, \overline{YZ} is 32 yards long and angles are as marked. What is the length of \overline{XY} , in yards?



- F. 32
- G. 34
- H. 36
- J. 76
- K. 78

2.

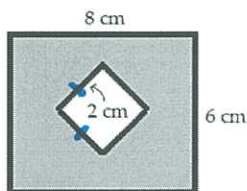
What is the value of x in the triangle shown below?



- A. 33
- B. 44
- C. 54
- D. 92
- E. Cannot be determined from the given information

3.

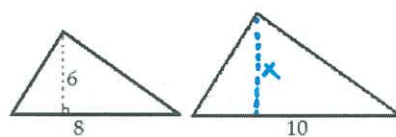
A metal worker uses a machine to cut squares out of sheets of aluminum. How much aluminum is left in the sheet below?



- A. 44 cm^2
- B. 46 cm^2
- C. 50 cm^2
- D. 52 cm^2

4.

The two triangles below are similar.



What is the area of the large one?

$$\frac{6}{8} = \frac{x}{10}$$

- A. 30
- B. 35
- C. 37.5
- D. 40